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 NEWS  1           Web Page for STN Seminar Schedule - N. America
 NEWS  2  MAY 01   New CAS web site launched
 NEWS  3  MAY 08   CA/CAplus Indian patent publication number format defined
 NEWS  4  MAY 14   RDISCLOSURE on STN Easy enhanced with new search and display
                   fields
 NEWS  5  MAY 21   BIOSIS reloaded and enhanced with archival data
 NEWS  6  MAY 21   TOXCENTER enhanced with BIOSIS reload
 NEWS  7  MAY 21   CA/CAplus enhanced with additional kind codes for German
                   patents
 NEWS  8  MAY 22   CA/CAplus enhanced with IPC reclassification in Japanese
                   patents
 NEWS  9  JUN 27   CA/CAplus enhanced with pre-1967 CAS Registry Numbers
 NEWS 10  JUN 29   STN Viewer now available
 NEWS 11  JUN 29   STN Express, Version 8.2, now available
 NEWS 12  JUL 02   LEMBASE coverage updated
 NEWS 13  JUL 02   LMEDLINE coverage updated
 NEWS 14  JUL 02   SCISEARCH enhanced with complete author names
 NEWS 15  JUL 02   CHEMCATS accession numbers revised
 NEWS 16  JUL 02   CA/CAplus enhanced with utility model patents from China
 NEWS 17  JUL 16   CAplus enhanced with French and German abstracts
 NEWS 18  JUL 18   CA/CAplus patent coverage enhanced
 NEWS 19  JUL 26   USPATFULL/USPAT2 enhanced with IPC reclassification
 NEWS 20  JUL 30   USGENE now available on STN
 NEWS 21  AUG 06   CAS REGISTRY enhanced with new experimental property tags
 NEWS 22  AUG 06   BEILSTEIN updated with new compounds
 NEWS 23  AUG 06   FSTA enhanced with new thesaurus edition
 NEWS 24  AUG 13   CA/CAplus enhanced with additional kind codes for granted
                   patents
 NEWS 25  AUG 20   CA/CAplus enhanced with CAS indexing in pre-1907 records

 NEWS EXPRESS  29 JUNE 2007:  CURRENT WINDOWS VERSION IS V8.2,
               CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.

 NEWS HOURS    STN Operating Hours Plus Help Desk Availability
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 NEWS IPC8     For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that
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FILE 'HOME' ENTERED AT 17:38:08 ON 20 AUG 2007

=> file biosis, medline,
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

FILE 'BIOSIS' ENTERED AT 17:38:42 ON 20 AUG 2007
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FILE 'MEDLINE' ENTERED AT 17:38:42 ON 20 AUG 2007

=> s synthetic gene
L1         1676 SYNTHETIC GENE

=> s l1 and (encoding polypeptide segment)
L2            0 L1 AND (ENCODING POLYPEPTIDE SEGMENT)

=> e santi/au
E1            3      SANTHYA K G/AU
E2            3      SANTHYADKA GANESHA/AU
E3            0 --> SANTI/AU
E4           59      SANTI A/AU
E5           48      SANTI A L/AU
E6            2      SANTI A M/AU
E7            1      SANTI A N/AU
E8            1      SANTI A NOELLE NOELLE/AU
E9            2      SANTI ALESSANDRO/AU
E10           1      SANTI ANA E J D/AU
E11           7      SANTI ANDREA/AU
E12           2      SANTI ANDREA N/AU

=> s  l1 and (PKS)
L3            4 L1 AND (PKS)

=> d l3 ti abs ibib tot

L3   ANSWER 1 OF 4  BIOSIS  COPYRIGHT (c) 2007 The Thomson Corporation  on STN
TI   Redesign, synthesis and functional expression of the 6-deoxyerythronolide
     B polyketide synthase gene cluster.
AB   A generic design of Type I polyketide synthase genes has been reported in
     which modules, and domains within modules, are flanked by sets of unique
     restriction sites that are repeated in every module [1]. Using the
     universal design, we synthesized the six-module DEBS gene cluster
     optimized for codon usage in E. coli, and cloned the three open reading
     frames into three compatible expression vectors. With one correctable
     exception, the amino acid substitutions required for restriction site
     placements were compatible with polyketide production. When expressed in
     E. coli the codon-optimized synthetic gene cluster
     produced significantly more protein than did the wild-type sequence.
     Indeed, for optimal polyketide production, PKS expression had to
     be down-regulated by promoter attenuation to achieve balance with
     expression of the accessory proteins needed to support polyketide
     biosynthesis.
ACCESSION NUMBER:    2006:265450  BIOSIS
DOCUMENT NUMBER:     PREV200600266462
TITLE:               Redesign, synthesis and functional expression of the
                     6-deoxyerythronolide B polyketide synthase gene cluster.
AUTHOR(S):           Menzella, Hugo G.; Reisinger, Sarah J.; Welch, Mark;
                     Kealey, James T.; Kennedy, Jonathan; Reid, Ralph; Tran,
                     Chan Q.; Santi, Daniel V. [Reprint Author]
CORPORATE SOURCE:    Kosan Biosci Inc, 3832 Bay Ctr Pl, Hayward, CA 94545 USA
                     santi@kosan.com
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SOURCE: Journal of Industrial Microbiology & Biotechnology, (JAN 2006) Vol. 33, No. 1, pp. 22-28.
ISSN: 1367-5435.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 10 May 2006
Last Updated on STN: 10 May 2006

L3 ANSWER 2 OF 4 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
TI Approaches to stabilization of inter-domain recombination in polyketide synthase gene expression plasmids.
AB Regions of extremely high sequence identity are recurrent in modular polyketide synthase (PKS) genes. Such sequences are potentially detrimental to the stability of PKS expression plasmids used in the combinatorial biosynthesis of polyketide metabolites. We present two different solutions for circumventing intraplasmid recombination within the megalomicin PKS genes in Streptomyces coelicolor. In one example, a synthetic gene was used in which the codon usage was reengineered without affecting the primary amino acid sequence. The other approach utilized a heterologous subunit complementation strategy to replace one of the problematic regions. Both methods resulted in PKS complexes capable of 6-deoxyerythronolide B analogue biosynthesis in S. coelicolor CH999, permitting reproducible scale-up to at least 5-1 stirred-tank fermentation and a comparison of diketide precursor incorporation efficiencies between the erythromycin and megalomicin PKSs.
ACCESSION NUMBER: 2003:322319 BIOSIS
DOCUMENT NUMBER: PREV200300322319
TITLE: Approaches to stabilization of inter-domain recombination in polyketide synthase gene expression plasmids.
AUTHOR(S): Hu, Z.; Desai, R. P.; Volchegursky, Y.; Leaf, T.; Woo, E.; Licari, P.; Santi, D. V.; Hutchinson, C. R.; McDaniel, R. [Reprint Author]
CORPORATE SOURCE: Kosan Biosciences Inc., 3832 Bay Center Place, Hayward, CA, 94545, USA
mcdaniel@kosan.com
SOURCE: Journal of Industrial Microbiology & Biotechnology, (March 2003) Vol. 30, No. 3, pp. 161-167. print.
ISSN: 1367-5435.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 9 Jul 2003
Last Updated on STN: 9 Jul 2003

L3 ANSWER 3 OF 4 MEDLINE on STN
TI Redesign, synthesis and functional expression of the 6-deoxyerythronolide B polyketide synthase gene cluster.
AB A generic design of Type I polyketide synthase genes has been reported in which modules, and domains within modules, are flanked by sets of unique restriction sites that are repeated in every module [1]. Using the universal design, we synthesized the six-module DEBS gene cluster optimized for codon usage in E. coli, and cloned the three open reading frames into three compatible expression vectors. With one correctable exception, the amino acid substitutions required for restriction site placements were compatible with polyketide production. When expressed in E. coli the codon-optimized synthetic gene cluster produced significantly more protein than did the wild-type sequence. Indeed, for optimal polyketide production, PKS expression had to be down-regulated by promoter attenuation to achieve balance with expression of the accessory proteins needed to support polyketide biosynthesis.
ACCESSION NUMBER: 2006003169 MEDLINE
DOCUMENT NUMBER: PubMed ID: 16187094
TITLE: Redesign, synthesis and functional expression of the

6-deoxyerythronolide B polyketide synthase gene cluster.

AUTHOR: Menzella Hugo G; Reisinger Sarah J; Welch Mark; Kealey James T; Kennedy Jonathan; Reid Ralph; Tran Chau Q; Santi Daniel V

CORPORATE SOURCE: Kosan Biosciences, Inc., 3832 Bay Center Place, Hayward, CA, 94545, USA.. santi@kosan.com

SOURCE: Journal of industrial microbiology & biotechnology, (2006 Jan) Vol. 33, No. 1, pp. 22-8. Electronic Publication: 2005-09-27.
Journal code: 9705544. ISSN: 1367-5435.

PUB. COUNTRY: England: United Kingdom

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200611

ENTRY DATE: Entered STN: 4 Jan 2006
Last Updated on STN: 2 Nov 2006
Entered Medline: 1 Nov 2006

L3 ANSWER 4 OF 4 MEDLINE on STN

TI Approaches to stabilization of inter-domain recombination in polyketide synthase gene expression plasmids.

AB Regions of extremely high sequence identity are recurrent in modular polyketide synthase (PKS) genes. Such sequences are potentially detrimental to the stability of PKS expression plasmids used in the combinatorial biosynthesis of polyketide metabolites. We present two different solutions for circumventing intra-plasmid recombination within the megalomicin PKS genes in Streptomyces coelicolor. In one example, a synthetic gene was used in which the codon usage was reengineered without affecting the primary amino acid sequence. The other approach utilized a heterologous subunit complementation strategy to replace one of the problematic regions. Both methods resulted in PKS complexes capable of 6-deoxyerythronolide B analogue biosynthesis in S. coelicolor CH999, permitting reproducible scale-up to at least 5-l stirred-tank fermentation and a comparison of diketide precursor incorporation efficiencies between the erythromycin and megalomicin PKSs.

ACCESSION NUMBER: 2003195087 MEDLINE

DOCUMENT NUMBER: PubMed ID: 12715253

TITLE: Approaches to stabilization of inter-domain recombination in polyketide synthase gene expression plasmids.

AUTHOR: Hu Z; Desai R P; Volchegursky Y; Leaf T; Woo E; Licari P; Santi D V; Hutchinson C R; McDaniel R

CORPORATE SOURCE: Kosan Biosciences Inc., 3832 Bay Center Place, Hayward, CA 94545, USA.

SOURCE: Journal of industrial microbiology & biotechnology, (2003 Mar) Vol. 30, No. 3, pp. 161-7. Electronic Publication: 2003-03-01.
Journal code: 9705544. ISSN: 1367-5435.

PUB. COUNTRY: England: United Kingdom

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 200309

ENTRY DATE: Entered STN: 26 Apr 2003
Last Updated on STN: 18 Sep 2003
Entered Medline: 17 Sep 2003